

Listing of Claims

1. (Amended Twice) A method of manufacturing a Coriolis flowmeter adapted to extend a received process material flow having an ultra high level of purity free from contamination due to ion transfer from said Coriolis flow meter to said process material; said method comprising the steps of:

coupling a flow tube means to a base, wherein said flow tube means is formed from PTFE or PFA;

affixing a driver to said flow tube means;

coupling a pick-off means to said flow tube means; and

affixing inlet and outlet ends of said flow tube means to at least one process connection formed from PTFE or PFA to form an ultra pure flow path for a process material flow through said flow tube means.

2. (Canceled)

3. (Original) The method of claim 1 characterized in that said step of coupling said flow tube means to said base is proceeded by the step of etching said flow tube means to create a surface suitable for coupling and affixing flowmeter components.

4. (Original) The method of claim 3 characterized in that said etching step comprises the step of using an etching solution containing a glycol diether.

5. (Original) The method of claim 3 characterized in that said etching step comprises the step of heating an etching solution to an elevated temperature.

6. (Original) The method of claim 3 characterized in that said etching step comprises the step of agitating said flow tube means in an etching solution.

7. (Original) The method of claim 1 characterized in that said step of coupling said flow tube means to said base is proceeded by the step of straightening said flow tube means to eliminate any inherent curvature or unwanted residual bends.

8. (Original) The method of claim 7 characterized in that said straightening step comprises the steps of:

placing said flow tube means in a straightening fixture;

heating said flow tube means and said straightening fixture;

cooling said flow tube means and said straightening fixture; and
removing said flow tube means from said straightening fixture.

9. (Original) The method of claim 1 characterized in that said step of coupling said flow tube means to said base comprises the step of attaching said flow tube means to said base using adhesive.

10. (Original) The method of claim 9 characterized in that said step of coupling said flow tube means to said base using said adhesive comprises the step of using cyanoacrylate adhesive.

11. (Withdrawn)

12. (Original) The method of claim 1 characterized in that said step of affixing said driver means to said flow tube means further comprises the step of attaching said driver means to said flow tube means using adhesive.

13. (Original) The method of claim 12 characterized in that said step of affixing said driver means to said flow tube means further comprises the step of using cyanoacrylate adhesive.

14. (Original) The method of claim 1 characterized in that said step of coupling said pick-off means to said flow tube means further comprises the step of attaching said pick-off means to said flow tube means using adhesive.

15. (Original) The method of claim 14 characterized in that said step of coupling said pick-off means to said flow tube means further comprises the step of using cyanoacrylate adhesive.

16. (Original) The method of claim 1 further comprising coupling said at least one process connection to said base.

17. (Original) The method of claim 16 characterized in that the step of coupling said process connection to said base comprises the steps of:
forming a receiving hole into said base; and
securing a fixed element of said process connection into said receiving hole.

18. (Original) The method of claim 17 characterized in that the step of securing said fixed element of said process connection into said receiving hole comprises the step of adhering said fixed element of said process connection into said receiving hole.

19. (Original) The method of claim 18 characterized in that said step of adhering said fixed element of said process connection into said receiving hole further comprises the step of using cyanoacrylate adhesive.

20. (Withdrawn)

21. (Withdrawn)

22. (Withdrawn)

23. (Original) The method of claim 16 characterized in that said step of coupling said process connection to said base comprises the step of adhering a fixed element of said process connection onto said base.

24. (Original) The method of claim 23 characterized in that said step of adhering said process connection to said base further comprises the step of using cyanoacrylate adhesive.

25. (Original) The method of claim 1 characterized in that said step of affixing said ends of said flow tube means to said at least one process connection comprises the steps of:

flaring said end of said flow tube means; and

inserting said flared end of said flow tube means onto conical stub of said at least one process connection.

26. (Original) The method of claim 1 characterized in that said step of affixing said end of said flow tube means to said at least one process connection comprises the steps of:

inserting said end of said flow tube means through said at least one process connection until said end of said flow tube means are flush with face of said at least one process connection; and

sealing said end of said flow tube means to said face of said at least one process connection.

27. (Original) The method of claim 26 characterized in that said step of sealing said end of said flow tube means to said face of said at least one process connection comprises the step of adhering said end of said flow tube means to said face of said at least one process connection.

28. (Withdrawn)

29. (Withdrawn)

30. (Original) The method of claim 26 characterized in that said step of sealing said end of flow tube means to said face of said at least one process connection comprises the step of laser welding said end of said flow tube means to said face of said at least one process connection.

31. (Original) The method of claim 1 characterized in that said step of coupling said pick-off means to said flow tube means comprises the step of making portions of said flow tube means opaque in order to facilitate use of optical pick-offs.

B1 32. (Original) The method of claim 1 further comprising affixing a temperature sensing device to said Coriolis flowmeter.

33. (Original) The method of claim 32 characterized in that said step of affixing a temperature sensing device comprises the step of affixing a resistance temperature measuring device to said Coriolis flowmeter.

34 - 49 (Withdrawn)
